RAPID DEPLOYMENT CAPABILITY FOR CHARACTERIZATION OF UNIQUE EVENTS

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Background

At the BERAC committee meeting it was asked whether ASP is ready to take advantage of unique opportunities to sample and follow and characterize unique events such as ***volcanic eruptions***, ***large forest fires***.

Such capability would require availability of suitable aircraft, equipment, and personnel and ***draw on existing capabilities***.

Instruments and personnel might be rapidly deployed if ASP had an ongoing aerosol characterization facility.

Precedents

During the cold war (and still at present?) DOE maintained a fleet of aircraft ready to sample air downwind of atmospheric (and underground) nuclear weapons tests.

Special deployment to characterize Kuwait oil field fires.

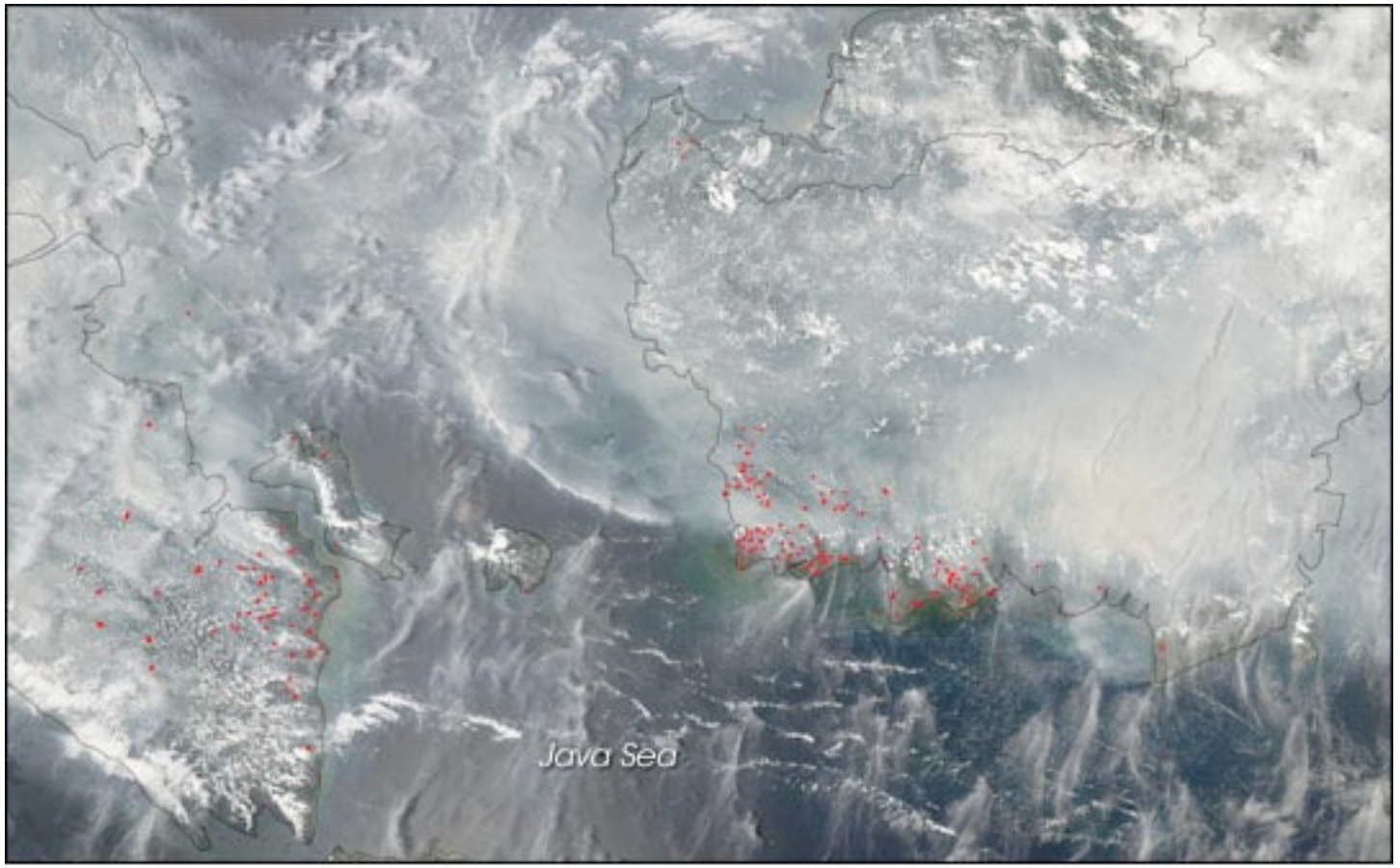
Motivation

Unique aerosol events can provide important or essential information on climate influences of atmospheric aerosols.

Accurate characterization of volcanic aerosol can more accurately quantify climate forcing needed as input to models examining sensitivity and time response of climate to perturbations.

Large biomass fires (such as forest fires now occurring in Indonesia) present unique opportunities to characterize such aerosols for input to models.

MODIS IMAGE OF SMOKE FROM 2006 INDONESIA FIRES



MODIS Aqua satellite image from Sunday, October 8, 2006, shows haze in the area in visible light. Smoke appears grayish white in contrast to the bright white of clouds. Fires detected by MODIS are marked in red.